

We claim:

1. In an electrophoretic coating method in which a conductive substrate is contacted with an electrophoretic coating bath composition and an electric current is imposed thereon, the improvement comprising the coating composition being an equilibrated water based emulsion of ionic polymeric particles of nanometric size having a pH of 7.8 to 9 and a conductivity of 800-1500 $\mu\text{S}/\text{cm}$.
2. The method according to claim 1, wherein the average size of the polymeric particle is between 10 to 100 nm.
3. The method according to claim 2, wherein the coating bath composition has a pH of 7.9 to 8.5 and a conductivity of 800 to 1300 $\mu\text{S}/\text{cm}^{-1}$.
4. The method according to claim 2, wherein the coating bath composition does not contain an electrophoretically coatable pigment.
5. The method according to claim 2, wherein the coating bath composition contains an electrophoretically coatable pigment.
6. The method according to claim 2, wherein the coating bath composition contains about 1 to 30 weight percent solids.
7. The method according to claim 2, wherein the coating is effected at room temperature employing a driving voltage of about 10 to 30 volts for about 15 to 60 seconds.
8. The method according to claim 2, wherein the coating formed is baked.
9. The method according to claim 8, wherein the baking is effected at a temperature of about 100 to 180°C for about 20 to 30 minutes.
10. The method according to claim 8, wherein the coating bath composition does not contain an electrophoretically coatable pigment.

11. The method according to claim 8, wherein the coating bath composition contains an electrophoretically coatable pigment.